REMARKS

Favorable reconsideration and allowance of the present patent application are respectfully requested in view of the foregoing amendments and the following remarks. Claims 6-11 and 20-24 are pending in the application.

An Information Disclosure Statement and accompanying PTO-1449 form were filed on May 10, 2002. There is presently no indication that the Examiner considered the documents identified in that Information Disclosure Statement. Accordingly, the Examiner is respectfully requested to acknowledge consideration of the documents identified in that Information Disclosure Statement by initialing the PTO-1449 form and returning a copy of the initialed form to the undersigned.

35 U.S.C. § 102 & 103 Rejections

Claims 6-11 and 20-24 were rejected under 35 U.S.C. § 103 (a) as allegedly being unpatentable over Sun et al. (U.S. Patent No. 5,969,764, "Sun") in view of Chen et al. (U.S. Patent No. 6,057,884, "Chen"). Applicant respectfully traverses each of these rejections for at least the following reasons.

The Examiner has rejected the claims once again relying on the Sun reference but this time in combination with Chen, a newly applied reference. However, the Examiner has maintained the prior misinterpretations of Sun.

For example, as noted in prior responses, Sun does not disclose a display speed information decoding means. The Examiner again relies on values from Tables 5 and 4

in formulating this rejection. However, Tables 4 and 5 are not related. Table 5 is related to Table 2 ("low-bit rate") as noted in column 12, lines 26-30. In contrast, Table 4 corresponds to "high bit-rate" simulations and the different bit rates for the different test videos. Clearly, no relevant conclusion can be drawn from relating Tables 4 and 5 that are two non-related Tables. Further, the bit rates of the various test videos of Tables 5 and 6 correspond to the actual video encoding rates of the videos themselves. For example, Table 2 shows the following data:

ID	Sequence	Bit Rate	Frame Rate	Format
1	Akiyo, Container	10	7.5	QCIF
3	News	48	7.5	CIF

Therefore, the fact that the various test videos bit rates are different as encoded does not teach display speed information indicating a number of objects displayed per a unit time. Correspondingly, it is to be expected that the variable input/constant output encoder would correlate to the various input test videos bit rates (i.e., the Akiyo, Container-1 video approaches 10 (9.86) and News-3 video approaches 48 (47.68), as shown in Table 5).

Further, in regard to Table 4, the following data is provided:

ID	Sequence	Bit Rate	Frame Rate	Format
6	Akiyo, Container	10	10	QCIF
7	News	192	15	CIF
8	Coastguard	384	30	CIF

Similar to Table 2 above, the "high bit-rate" simulations in Table 4 correspond to the different bit / frame rates for the different test videos in Table 6. Although the Examiner has referenced Table 5 in connection with Table 4, clearly these tables are not related and do not serve as a basis for teaching the display speed information decoding means as alleged by the Examiner.

Additionally, the Examiner continues to misconstrue the Sun reference in terms of the duration of each frame indicating the number of VO's. Even using the Examiner's own interpretation and looking at the results disclosed in Table 6, it is clear that the "duration" of each frame does not "indicate the number of VO's", as alleged by the Examiner. As can be clearly seen in Table 6 (column 13, lines 1-21), both the "News" and the "Coastguard" have the same number of VO's (i.e., 0-3). Therefore, the Examiner's interpretation of the Sun et al. reference is contradicted by the patent itself. Accordingly, the Sun et al. patent fails to teach display speed information indicating a number of objects displayed per a unit time, as alleged by the Examiner.

However, in the Examiner's alleged motivation and combination with Chen, the Examiner apparently contradicts his logic presented above and indicates that Sun does

not specifically disclose "the display speed information indicating a number of objects displayed per a unit time." The Examiner then alleges that Chen teaches this feature and cites col. 14, line 3-5 (recited below as the last part of col. 13 line 55 to col. 14, line 5).

> The input video sequence which is used to create the base and enhancement layer sequences has full resolution (e.g. 720x480 for ITU-R 601 corresponding to National Television Standards Committee (NTSC) or 720x576 for ITU-R corresponding to Phase Alternation Line (PAL)) and full frame rate (30 frames/60 fields for ITU-R corresponding to NTSC or 25 frames/50 fields for ITU-R 601 corresponding to PAL). Scaleable coding is performed such that the resolution and frame rate of objects are preserved by using the enhancement layer coding. The video object in the base layer, comprising VOPs 520 and 532, has a lower resolution (e.g. quarter size of the full resolution VOP) and a lower frame rate (e.g. one third of the original frame rate). Moreover, in the enhancement layer, only the VOP 520 is enhanced. The remainder of the frame 510 is not enhanced. While only one VOP is shown, virtually any number of VOPs may be provided. Moreover, when two or more VOPs are provided, all or only selected ones may be enhanced.

As is clearly indicated above, the VOP in the enhancement layer does not contain display speed information as alleged by the Examiner. Instead, the VOP is used to interpolate the base layer (at a lower resolution / frame rate) to a new standard at a higher resolution / frame rate. As shown in related Fig. 5, the enhancement layer VOPs 522, 524, 526 and 542 are derived from base layer VOPs 520 and 540. Therefore, the statement that "when two or more VOPs are provided, all or only selected ones may be enhanced", teaches only that if more than one VOP is enhanced the VOPs in the enhancement layer will share the same resolution / frame rate to enhance the base VOPs to the higher resolution / frame rate that is desired. Accordingly, Applicant respectfully submits that the Chen reference does not teach "the display speed

information indicating a number of objects displayed per a unit time," as alleged by the Examiner.

As stated in MPEP § 2143.01, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970). Neither Sun et al., Chen et al. or the combination of these references applied by the Examiner disclose the features of Applicant's claimed combinations as noted above. Therefore, these references do not render Applicant's claimed combinations obvious as alleged by the Examiner. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection.

Additionally, the Examiner has not provided any reason why one of ordinary skill in the art would have been motivated to combine the references as alleged by the Examiner. The Examiner has only stated that the references, taken as a whole, would lead one to this combination.

However, as stated in MPEP § 2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The mere fact that references can be

combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Accordingly, Applicant respectfully submits that the Examiner has failed to show any motivation for the combination alleged by the Examiner.

Finally, Applicant submits that one of ordinary skill in the art would not have been motivated to modify the systems of Sun and Chen to arrive at Applicant's claimed combinations absent impermissible hindsight reference to Applicant's specification.

For at least the foregoing reasons, it is respectfully submitted that claim 6 is distinguishable over the applied art.

Independent claim 20 recites related subject matter to the above-identified independent claim 6 and is therefore allowable for reasons similar to those given above. Further, Applicants have amended claims 6 and 20 to emphasize additional features the references fail to teach or suggest. For example, the references fail to disclose setting the object display speed information (e.g., VOP rate information as shown in Fig. 9) in a header information area (e.g., GOV Header) for a layer (e.g., GOV layer) comprising a plurality of VOP data sets in an encoded bit stream.

The remaining dependent claims are allowable at least by virtue of their dependency on the above-identified independent claim. Moreover, these claims recite additional subject matter, which is not suggested by the documents taken either alone or in combination.

CONCLUSION

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance and such allowance is respectfully solicited. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Attached hereto is a marked-up version of the changes made to the application by this Response if applicable.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1. 17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made

(Rev. 11/28/01)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 6 and 20 have been amended as follows:

6. (Amended) An image decoding device which decodes an encoded bit stream formed by encoding images for each object, comprising:

display speed information decoding means for decoding object display speed information from said encoded bit stream, the display speed information including, in a header information area for a layer comprising a plurality of VOP data sets, a codeword indicating a number of objects displayed per a unit time; and

control means for controlling the reconstruction of said encoded images encoded for each object, based on said decoded object display speed information.

20. (Amended) An image decoding method for decoding an encoded bit stream formed by encoding images for each object, comprising the steps of:

decoding object display speed information from said encoded bit stream, the display speed information including, in a header information area for a layer comprising a plurality of VOP data sets, a codeword indicating a number of objects displayed per a unit time; and

[controlling the reconstruction of] reconstructing said encoded images encoded for each object, based on said decoded object display speed information.